

Amendments to the Claims:

Please add new Claims 70 and 71.

The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing:

1-43. (Cancelled)

44. (Previously Presented) A copper composition characterized by an anisotropic x ray emission spectrometry (XES) image.
45. (Previously Presented) A copper composition wherein the radial XES image detects elements not detected in the axial XES image.
46. (Previously Presented) The copper composition of Claim 45 wherein the radial XES image detects an element selected from the group consisting of sulfur, chlorine, potassium, aluminum and silicon.
47. (Previously Presented) A copper composition manufactured by a process consisting of exposing a starting composition to an iterative cyclic process in the presence of a carbon source, said composition is characterized by an anisotropic XES image.
48. (Previously Presented) A copper composition, free of an element, characterized by an XES image that detects said element.
49. (Previously Presented) A composition characterized by an X-ray fluorescence analysis report wherein the report recites the presence of an element in the periodic table wherein said composition has not been in contact with said element.
50. (Currently Amended) [[The]] A composition of Claim 49 comprising a metal, characterized by an X-ray fluorescence analysis report wherein the report recites

the presence of an element in the periodic table wherein said composition has not been in contact with said element.

51. (Previously Presented) The composition of Claim 49 wherein said composition is manufactured by exposing a starting composition to an iterative cyclic process.
52. (Previously Presented) The composition of Claim 49 wherein said composition is manufactured by exposing a starting composition to an iterative cyclic process in the presence of a carbon source.
53. (Previously Presented) A composition characterized by an X-ray fluorescence analysis wherein the analysis recites an emission detected at room temperature indicating the presence of an element in the periodic table wherein said composition has not been in contact with said element.
54. (Currently Amended) A [[The]] composition of Claim 53 comprising a metal, characterized by an X-ray fluorescence analysis wherein the analysis recites an emission detected at room temperature indicating the presence of an element in the periodic table wherein said composition has not been in contact with said element.
55. (Previously Presented) The composition of Claim 53 wherein said composition is manufactured by exposing a starting composition to an iterative cyclic process.
56. (Previously Presented) The composition of Claim 53 wherein said composition is manufactured by exposing a starting composition to an iterative cyclic process in the presence of a carbon source.
57. (Currently Amended) The composition of claim ~~51 or claim 55~~ 52 or claim 56, wherein said composition comprises gold or alloys thereof.

58. (Currently Amended) The composition of claim ~~51 or claim 55~~ 52 or claim 56, wherein said composition comprises silver or alloys thereof.
59. (Currently Amended) The composition of claim ~~51 or claim 55~~ 52 or claim 56, wherein said composition comprises tin or alloys thereof.
60. (Currently Amended) The composition of claim ~~51 or claim 55~~ 52 or claim 56, wherein said composition comprises lead or alloys thereof.
61. (Currently Amended) The composition of claim ~~51 or claim 55~~ 52 or claim 56, wherein said composition comprises zinc or alloys thereof.
62. (Currently Amended) The composition of claim ~~51 or claim 55~~ 52 or claim 56, wherein said composition comprises sodium or alloys thereof.
63. (Currently Amended) The composition of claim ~~51 or claim 55~~ 52 or claim 56, wherein said composition comprises vanadium or alloys thereof.
64. (Currently Amended) The composition of claim ~~51 or claim 55~~ 52 or claim 56, wherein said composition comprises chromium or alloys thereof.
65. (Currently Amended) The composition of claim ~~51 or claim 55~~ 52 or claim 56, wherein said composition comprises manganese or alloys thereof.
66. (Currently Amended) The composition of claim ~~51 or claim 55~~ 52 or claim 56, wherein said composition comprises tantalum or alloys thereof.
67. (Currently Amended) The composition of claim ~~51 or claim 55~~ 52 or claim 56, wherein said composition comprises hafnium or alloys thereof.

68. (Currently Amended) The composition of claim ~~51 or claim 55~~ 52 or claim 56, wherein said composition comprises tungsten or alloys thereof.
69. (Currently Amended) ~~[[The]] A composition of claim 50 or claim 54, wherein said composition comprises~~ comprising copper, nickel, cobalt, gold, silver, tin, lead, zinc, sodium, magnesium, potassium, silicon, iron, vanadium, chromium, manganese, tantalum, hafnium, tungsten or alloys thereof, characterized by an X-ray fluorescence analysis report wherein the report recites the presence of an element in the periodic table wherein said composition has not been in contact with said element or an X-ray fluorescence analysis wherein the analysis recites an emission detected at room temperature indicating the presence of an element in the periodic table wherein said composition has not been in contact with said element.
70. (New) A composition comprising a transition metal, characterized by an X-ray fluorescence analysis report wherein the report recites the presence of an element in the periodic table wherein said composition has not been in contact with said element.
71. (New) A composition comprising a metal, characterized by an X-ray fluorescence analysis wherein the analysis recites an emission detected at room temperature indicating the presence of an element in the periodic table wherein said composition has not been in contact with said element.